

COASTAL CONSERVANCY

Staff Recommendation

June 16, 2005

**HUMBOLDT FISH PASSAGE IMPROVEMENT PROGRAM**

File No. 05-041-01

Project Manager: Michael Bowen

**RECOMMENDED ACTION:** Authorization to implement two fish-passage improvement projects at Rocky Gulch and Warren Creek within the County of Humboldt.

**LOCATION:** Rocky Gulch, tributary to Humboldt Bay, and Warren Creek, tributary to the Mad River in Humboldt County (Exhibit 1).

**PROGRAM CATEGORY:** Resource Enhancement

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**EXHIBITS**

Exhibit 1: Project Location and Site Maps

Exhibit 2: Letters of Support

Exhibit 3: 2005 Mitigated Negative Declaration for Rocky Gulch and Warren Creek projects

Exhibit 4: Mitigation Monitoring and Reporting Plan

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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the County of Humboldt to implement two fish passage improvement projects at Rocky Gulch and Warren Creek, subject to the following conditions:

1. Prior to the implementation of projects, the County shall provide and the Executive Officer of the Conservancy shall approve in writing:
  - a) a work program, schedule of completion, project budget, and any subcontractors to be employed for each project;
  - b) evidence that all necessary permits have been obtained.
  - c) A signage plan acknowledging the Conservancy and Proposition 12 funding.

2. The County shall acknowledge Conservancy and Proposition 12 funding by erecting and maintaining on the project sites a sign that has been reviewed and approved by the Conservancy's Executive Officer."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed projects are consistent with the purposes and criteria set forth in Chapter 6 of Division 21, sections 31251 – 31270 of the Public Resources Code regarding the enhancement of coastal resources.
  2. The Conservancy has independently reviewed the Negative Declaration prepared and adopted on May 19, 2005 by the Department of Fish and Game, attached as Exhibit 3, and finds that there is no substantial evidence that the Rocky Gulch and Warren Creek projects will have a significant effect on the environment, as defined in 14 California Code of Regulations Section 15382.
  3. There is no evidence before the Conservancy that the Rocky Gulch and Warren Creek projects will have a potentially adverse effect, either individually or cumulatively, on wildlife resources as defined under California Fish and Game Code 711.2.
  4. The Conservancy has on the basis of substantial evidence rebutted the presumption of adverse effect contained in 14 California Code of Regulations Section 753.5(d) regarding the potential for adverse effect on wildlife resources of the Rocky Gulch and Warren Creek projects as defined under California Fish and Game Code Section 711.2."
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## **PROJECT SUMMARY:**

At its May 18, 2005 meeting, the Conservancy authorized \$466,272 for the County of Humboldt to implement a variety of fish passage improvement projects. A condition of that grant was that, prior to implementation of any specific project, the County would return to the Conservancy for approval. The proposed authorization would enable the County to proceed with two fish passage improvement projects at Rocky Gulch and Warren Creek. The purpose of this authorization is to improve fish passage in streams where barriers to fish passage have resulted from the inappropriate design and construction of road crossings or other instream structures. Historically, road crossings, culverts, and other structures were inappropriately constructed, inadvertently preventing the upstream passage of anadromous fish, such as salmon, steelhead and coastal cutthroat trout.

Rocky Gulch, a tributary to Humboldt Bay, is located approximately four miles south of the town of Arcata. The project comprises an implementation project for a private road crossing. Rocky Gulch contains approximately 2.7 miles of potential habitat, less than one mile of which

is currently accessible. The County road crossing, the subject of a previously awarded planning grant and the first barrier in the system, is located at the intersection of the Old Arcata Road and Rocky Gulch, 0.8 miles upstream of Humboldt Bay. Design of the Old Arcata Road crossing will facilitate the County's construction of a fish passage improvement project at that site in fiscal year 2005-2006. The Rocky Gulch private road crossing is located 1.1 miles upstream of Humboldt Bay. Removal of both of these structures and replacement with a bridge and a bottomless arch culvert will permit free access for salmonids throughout the 2.7 miles of habitat.

Warren Creek, a tributary to the Mad River, is the subject of a project to replace the impassable culvert approximately 725 feet upstream of the confluence of Warren Creek and the Mad River. The site is located on Warren Creek Road, 1.2 miles west of the town of Glendale, and placement of a bottomless arch culvert would re-open approximately 2.5 miles of good quality anadromous fish habitat which is found above the culvert. The creek has cool summer water temperatures and relatively good pool-riffle habitat.

Like many such structures, these culverts have prevented fish from ascending streams due to excessive heights between culvert outlets and plunge pools below, and impassably high flow velocities within the culverts themselves. Fish capable of ascending barriers are often too fatigued to spawn. Fish prevented from ascending such culverts typically congregate in discharge pools below the culvert, where they may fall prey to predators or poachers. Moreover, culvert failures often result in road failure, mass failure of slopes, resultant erosion, property damage, and the degradation of waters and salmonid habitat downstream.

These and thousands of other such barriers to fish passage have been identified, and are cited in the Conservancy's recently completed report, "Inventory of Barriers to Fish Passage in California's Coastal Watersheds."

The opportunity to recover fish populations while improving local roads and diminishing future maintenance costs has made county governments keen participants in fish passage improvement projects. However, the ability of county governments to implement fish passage improvement projects is hampered by the ability of local government staff to effectively design, permit and implement promising projects. This grant would implement two fish passage improvement projects, thereby expediting the recovery of habitat for anadromous fish and other aquatic species found in coastal watersheds.

**Site Description:** Rocky Gulch, a tributary to Humboldt Bay, is located approximately four miles south of the town of Arcata. Warren Creek, a tributary to the Mad River, is located on Warren Creek Road, 1.2 miles west of the town of Glendale.

**Project History:** In 1997, the Counties of Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity agreed to collaborate on a proactive response to the federal listings of salmon as threatened species by forming the Five Counties Salmonid Conservation Program ("FCSCP"). The goal was to seek opportunities to contribute to the long-term recovery of salmon and steelhead in Northern California. The objectives were to: evaluate options for improving county plans, policies, and practices to provide or improve salmonid habitat; identify areas where Counties might be vulnerable to challenges under the ESA; and upgrade training programs and recovery project monitoring and reporting procedures. Initial meetings identified causative factors of salmonid declines and how county infrastructure contributed to that decline,

information gaps on limits to salmonid recovery, and priority tasks required to obtain missing information necessary for concerted recovery efforts. A high-priority task included conducting culvert inventories on county roads to evaluate fish passage and prioritize treatments.

The inventories and fish passage evaluations of culverts within the five counties' road systems were conducted between 1998 and 2000. The objective was to assess passage of juvenile and adult salmonids and develop project scheduling documents to prioritize corrective treatments to provide unimpeded fish passage. The inventories were limited to county-maintained crossings within anadromous stream reaches known to historically and/or currently support runs of coho salmon (*Oncorhynchus kisutch*), chinook salmon (*O. tshawytschia*), and/or steelhead (*O. mykiss irideus*).

Following completion of the final fish passage barrier reports, two of the counties sought financial assistance for project implementation from the Conservancy, and others sought funds from the California Department of Fish and Game. Subsequently, the Conservancy authorized grants to the Counties of Humboldt and Del Norte to help implement 10 fish passage improvement projects. These included: Lindsay Creek, a tributary to Mad River, and considered the best coho salmon and coastal cutthroat trout tributary within the entire Mad River watershed, and North and South Fork Anker Creek, tributaries to the Mad River. All of these projects have enjoyed tremendous success, with documented spawning and rearing of coho, steelhead, and Chinook salmon above the former barriers. Additionally, at the June, 2002 meeting, the Conservancy approved the Digger Creek Barrier Removal Project in Mendocino County, which was originally identified as a high priority in the Mendocino County inventory.

Simultaneously, and in response to an appropriation from the Salmon Habitat Restoration Program, sponsored by Senator Byron Sher (D-Palo Alto), the Conservancy conducted an extensive and first-of-its-kind inventory of existing fish passage barrier data for coastal California streams. That report identifies more than 20,000 potential barriers to fish passage, 65 of which are high – priority artificial total barriers to fish passage.

In an effort to expedite the design and permitting of high – priority projects, the Conservancy awarded a design and permitting grant to the County of Trinity to design, permit and prepare for implementation at least ten fish passage improvement projects on August 14, 2003. The County of Trinity and its partners in Humboldt County have utilized this grant effectively, leveraging the planning grant by securing funds to implement nearly all of the projects, and thereby ensuring the timely implementation of the projects. The Counties recently celebrated the 100<sup>th</sup> mile of historic habitat reopened to spawning and rearing for pacific salmon.

At its May 18 Board meeting, the Conservancy awarded a block grant of \$466,272 to Humboldt County to implement prioritized fish passage improvement projects identified in the Five Counties Salmonid Conservation Planning Program. The proposed projects rank high in that matrix.

If approved, this proposed authorization would further increase the number of successfully implemented projects, and reopen an estimated additional 5 miles of historic Coho salmon and steelhead habitat.

**PROJECT FINANCING:**

Coastal Conservancy (previously authorized)	\$466,272
Humboldt County (Biological and Technical Services)	\$32,000
<b>Total Project Cost</b>	<b>\$498,272</b>

The expected source of funds for these projects is the previous authorization of grant funds to the County from an appropriation to the Conservancy from the Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Act of 2000 (Proposition 12), Coastal Salmon Funds. The County will provide approximately \$32,000 of in-kind contributions in the form of data collection, technical analyses, project design, and permit material preparation for pre-implementation planning and implementation purposes.

**CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:**

The proposed projects are undertaken pursuant to Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270, respectively), as follows:

Pursuant to Section 31251, the Conservancy may award grants to local public agencies and non-profit organizations for the purpose of enhancement of coastal resources which, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Consistent with this section, the proposed authorization enables the County to enhance coastal fishery resources disturbed by incompatible land uses, such as inappropriate culvert installation.

Pursuant to §31251.2(a), "In order to enhance the natural or scenic character of coastal resources within the coastal zone, the Conservancy may undertake a project or award a grant...to enhance a watershed resource that is partly outside of the coastal zone...." Consistent with this section, the County, which is located partially outside of the coastal zone, requested Conservancy assistance with projects located within and outside the coastal zone. This assistance was sought in order to implement two projects intended to benefit salmon populations known to travel many miles upstream of the coastal zone boundary in order to fulfill their life history patterns. Indeed, salmon depend on unimpeded access to high quality habitat both within and outside of the coastal zone in order to survive. If salmon and other highly prized aquatic resources are to be maintained and restored to historic levels, funding must be provided to improve salmon habitat both within and outside the coastal zone. This section also requires the support of the California Department of Fish and Game. The Department is highly supportive of these projects, and a letter of support letter for this authorization from the Department is included in Exhibit 2.

Pursuant to Section 31252, all areas proposed for resource enhancement should be identified in a certified local coastal plan or program as requiring public action to resolve existing or potential

resource problems. The project work areas are located outside of the Coastal Zone. However, the aquatic resources and habitat quality of stream channels within and outside of the coastal zone boundaries are inextricably linked. Thus, the projects are consistent with the policies of the Humboldt Bay Local Coastal Program, as described in the Consistency With Local Coastal Programs section, below.

Finally, pursuant to Section 31253, “(the) Conservancy may provide up to the total of the cost of any coastal resource enhancement project....” and the amount of the Conservancy contribution shall be determined only after an assessment of funding generally available and other factors. The proposed contribution by the Conservancy was determined based on application of priority criteria, as discussed below, and after taking into account other available resources and the matching contributions to the project by other funding sources.

**CONSISTENCY WITH CONSERVANCY'S  
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 6 Objective A** of the Conservancy's Strategic Plan, the proposed projects will contribute to the development of approximately 70 plans and projects that preserve and restore coastal watersheds and create river parkways.

Consistent with **Goal 6 Objective A(1)** of the Conservancy's Strategic Plan, the proposed projects will leverage the results of the recently completed study of barriers to fish passage, through the implementation of these projects to improve habitat for anadromous fish. The proposed authorization will enable the Conservancy, in concert with the grantee, to increase available habitat for aquatic species, notably salmon, by removing instream barriers to their free migration. By employing the Conservancy's recently completed report, “An Inventory of Barriers to Fish Passage in California's Coastal Watersheds,” as well as the expertise of the grantee, the Conservancy will ensure measurable increases in available habitat and, presumably, measurable increases in anadromous fish populations within and above the project areas. In order to ensure the success of this strategy, Conservancy staff will, in conjunction with the grantee, monitor the efficacy of the projects and chronicle the degree of success at each site.

**CONSISTENCY WITH CONSERVANCY'S  
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

**Required Criteria**

1. **Promotion of the Conservancy's statutory programs and purposes:** See the “Consistency with Conservancy's Enabling Legislation” section above.
2. **Consistency with purposes of the funding source:** See the “Project Financing” section above.
3. **Support of the public:** Supporters of these projects include Congressman Mike Thompson, Assemblymember Patty Berg, the Department of Fish and Game, National Oceanic and

Atmospheric Administration: Fisheries, the County of Humboldt, and others. Letters of support are included in Exhibit 2.

4. **Location:** The project sites are described in the project summary section and geographically depicted on Exhibit 1.
5. **Need:** The County of Humboldt is especially rich in anadromous fish resources. However, existing barriers obstruct recovery within the full geographic range of species either listed or potentially listed under the federal and State endangered species acts. The removal of these prioritized barriers will substantially increase recovery efforts for these important fishery resources by providing anadromous salmonids access to spawning and rearing sites in upper portions of the watersheds.
6. **Greater-than-local interest:** The public trust value of California's salmon and steelhead populations is of great interest to all, and is a natural legacy too precious to lose. Moreover, the historic economic contributions from sport and commercial fishing can be recovered for the overall economic benefit of the State of California.

#### **Additional Criteria**

7. **Urgency:** Coho salmon are currently at six to 15% of their abundance during the 1940s. Given this decline, and in light of the State Recovery Strategy's primary objective of returning coho salmon to a level of sustained viability, while protecting their genetic integrity, enhancement projects with a high potential for recovering local populations of coho salmon are a high priority for the State.
8. **Leverage:** See the "Project Financing" section above.
9. **Innovation:** This partnership to recover anadromous fish populations through the improvement of existing County infrastructure, such as road culverts, represents an important trend in local government towards the proactive improvement of salmonid habitat on County property.
10. **Readiness:** The project applicant has demonstrated that it has the experience, expertise, local public support, and administrative capability necessary to commence and complete the project in a timely fashion.
11. **Realization of prior Conservancy goals:** The Conservancy has authorized grants to both the Humboldt Bay Harbor Commission and the Redwood Community Action Agency for the purpose of developing enhancement plans for Humboldt Bay and its tributary streams. The tributary streams and wetlands assessed in these plans serve as the nurseries of the juvenile salmonids outmigrating from tributary streams to Humboldt Bay. Therefore, the improvement of salmonid habitat in all streams tributary to Humboldt Bay will amplify enhancement measures regionally by increasing available upstream salmonid habitat. Moreover, these projects will further the Conservancy's goal of enhancing coastal watersheds generally.
12. **Cooperation:** The County, funding partners, and regulatory agencies have all proven themselves hearty supporters of fish passage improvement efforts. The unprecedented level of cooperation on these types of projects has directly resulted in the implementation of

successful projects that have provided increased habitat and increased populations of anadromous fish in our coastal watersheds.

**CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:**

The project work areas are located outside of the Coastal Zone. However, the aquatic resources and habitat quality of stream channels within and outside of the coastal zone boundaries are inextricably linked. Thus, the Rocky Gulch and Warren Creek projects are consistent with the policies of the Humboldt Bay Local Coastal Program that states:

“The biological productivity and the quality of coastal waters, (and) streams...appropriate to maintain optimum populations of marine organisms...shall be maintained, and, where feasible, restored through...minimizing alteration of natural streams.” (LCP, 3-55).

“New development within stream channels shall be permitted when there is no less environmentally damaging feasible alternative, where the best feasible mitigation measures have been provided to minimize environmental effects, and shall be limited to...wetlands, fishery, and wildlife enhancement and restoration projects....” (LCP, 3-56).

**COMPLIANCE WITH CEQA:**

The Department of Fish and Game (DFG) annually adopts an Initial Study and Mitigated Negative Declaration for fishery habitat improvement projects, including fish passage projects.

The Rocky Gulch and Warren Creek implementation projects were analyzed in the initial study and mitigated negative declaration adopted by the Department of Fish and Game (DFG) on May 19, 2005. (See Exhibit 3). No comments were received during the comment period.

The DFG found that the modification of culverts to remove fish barriers, classified in the environmental documents as “major action items,” may have the potential to cause minor short-term impacts on soil, vegetation, wildlife, water quality, and aquatic life, but that the measures to be incorporated into the project will lessen such impacts to an insignificant level. Therefore, the DFG found, the projects will have no significant environmental impact.

The 2005 Mitigated Negative Declaration characterizes potential adverse effects to the environment in the Mitigation Monitoring and Reporting Programs. The modification of culverts to remove fish barriers may have the potential to cause minor short-term impacts on soil, vegetation, wildlife, water quality, and aquatic life. Measures to be incorporated into the project will lessen such impacts to an insignificant level. A variety of measures are included in the Mitigation Monitoring and Reporting Programs to ensure that the projects included in the Negative Declarations have no significant environmental impacts. All, including the proposed projects, had the following potential adverse effects.

Biological Resources

The projects are timed to avoid impacts to aquatic habitat, notably being carried out in the summer dry season, from June 15 through November 1, or the first rainfall. All trash is removed from the project sites and equipment and fuels are stored outside of the stream’s high water



channel and riparian area. Control of invasives and exotic plants is included to avoid spreading. Access routes are limited to the minimum necessary to complete the work. Instream work is performed in isolation from the flowing stream by means of diverting the flow around the work area during the duration of the construction. Any equipment entering the active stream is preceded by an individual on foot to displace wildlife and prevent them from being crushed. Wildlife encountered during the course of construction is allowed to leave the area unharmed, and shall be directed in a safe direction away from the area. Red tree vole nests encountered at a work site will be flagged and avoided during construction. For any work sites containing western pond turtles, foothill yellow-legged frogs, or tailed frogs, the contractor shall provide a list of exclusion measures used to prevent take or injury to these species. All habitat improvements shall be done in accordance with techniques in the California Salmonid Stream Habitat Restoration Manual. DFG will survey all work sites for rare plants prior to ground disturbing activities. Rare plants will be avoided. A variety of measure are included to protect coho salmon, including avoidance of instream work by equipment, except to relocate flow, diversion of flow around project area, leaving large woody debris instream, and suitable fish relocation efforts. To avoid disturbing Northern spotted owls, no work within .25 miles of spotted owl habitat will occur between February 1 and July 31.

#### Geology and Soils

There is no potential for significant adverse impact to geology and soils, but a combination of inspection and erosion control measures will ensure avoidance of adverse impacts.

#### Hydrology and Water Quality

To adequately avoid adverse impacts to hydrology and water quality, all work shall be performed in isolation from flowing water, and inspections will ensure that turbidity control measures are in place.

Upon its independent review of the DFG's Mitigated Negative Declaration (Exhibit 3) for the projects, staff recommends that the Conservancy concur with DFG's finding that the projects do not have a potential for a significant effect on the environment as defined under 14 California Code of Regulations Section 15382.

Staff also recommends that the Conservancy find that on the basis of substantial evidence it has rebutted the presumption of adverse effect contained in 14 California Code of Regulations Section 753.5(d) regarding the potential for adverse effect on wildlife resources of the Rocky Gulch and Warren Creek projects as defined under California Fish and Game Code Section 711.2. Upon approval, staff will file Notices of Determination for these projects.